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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/613,426	07/10/2000	Hirofumi Ando	Q60058	9344
7590	04/28/2006			EXAMINER PARK, CHAN S
Sughrue Mion Zinn Macpeak & Seas 2100 Pennsylvania Avenue NW Washington, DC 20037-3202			ART UNIT 2625	PAPER NUMBER

DATE MAILED: 04/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/613,426	ANDO, HIROFUMI
	Examiner CHAN S. PARK	Art Unit 2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 20 March 2006.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1 and 4-21 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1 and 4-21 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

DOUGLAS Q. TRAN
PRIMARY EXAMINER

Tran, Douglas

Chan S. Park

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/20/06 has been entered.

Response to Amendment

2. Applicant's amendment was received on 3/20/06, and has been entered and made of record. Currently, **claims 1 and 4-21** are pending.

Response to Arguments

3. Upon review of the reference of Kajita et al. (U.S. Patent No. 6,069,706), which was cited in the Office Action dated 9/20/05 under 35 U.S.C. 102 (e), as being anticipating **claims 1, 9 and 14-21**, the examiner notes that the reference can still be interpreted as anticipating the claims, as currently amended.

Particularly, as amended, **claims 1, 9, 12 and 21** now require "transfer[ring] print data from the host to the printer by a plurality of logical channels... wherein the plurality of logical channels are assigned to one signal line." Referring to the definition of "channel" in the IEEE dictionary, a channel is defined as "a single path for transmitting

electric signal, usually in distinction from other parallel paths" (refer to page 3 of Final Office Action dated 9/20/05). Now, referring to teachings of Kajita, transferring print data from the host to the printer by a plurality of logical channels (fig. 3 & **col. 8, lines 26-33**), wherein the plurality of logical channels are assigned to one signal line (only one network signal line 3 is going into external communication circuit 4) is believed to be fully described in the cited sections of Kajita. It is evidently clear that the plural transmissions in *parallel manner* (line 30) require a plurality of logical channels (a plurality of electric signal paths) in the network signal line 3 because the parallel transmission cannot be processed with only one channel. Examiner does not find any clear distinctions between the data controller of Kajita and the invention described in the applicant's Specification and particularly, the claim wording. Hence, the previous rejection is maintained and repeated in the current Office Action.

Examiner respectfully requests the applicant to clearly distinguish the differences between the claimed terms "channel" and "signal line" from the Original Specification or other standard dictionary definitions. Further, an explanation of the difference between the signal line shown in fig. 1 of the Drawing and the network line (3) going into the external communication circuit 4 of Kajita is respectfully requested.

4. Furthermore, with respect to **claims 4 and 16**, the claims now require "obtaining a status during a copying process". Referring to steps 302 & 303 of fig. 26 and col. 22, lines 1-19, it is noted that the printing apparatus of Kajita discloses the method of obtaining the status during a copying process for notifying the user with the current

status of the apparatus. Accordingly, the previous rejection is maintained and repeated in the current Office Action.

Claim Objections

5. Claims 9 and 21 objected to because of the following informalities:

Claim 9, line 13, "the plurality of channels" should be -- the plurality of logical channels --;

Claim 21, line 7, "the plurality of channels" should be -- the plurality of logical channels --.

Appropriate correction is required.

The following quotations of 37 § CFR 1.75(d)(1) is the basis of objection:

(d)(1) The claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description. (See § 1.58(a)).

6. Claim 4 recites the limitation "obtaining a status during a copying process" in line

14. There is insufficient antecedent basis for this limitation in the claim. It is unclear if this "status" is referring to the status of the printer claimed in lines 15-16. Perhaps, "obtaining a status" should be -- obtaining the status of the printer -- and "a status" in line 15 should be -- the status --.

7. With respect to claim 16, arguments analogous to those presented for claim 4, are applicable.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 13 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It recites "instead of the printer in response to an interpretation result". It is unclear if this interpretation result is from the first or second interpretation section.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 9-14 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Kajita.

9. With respect to claim 9, Kajita discloses a printer for receiving print data from a host and printing the print data and also printing an original image input through image read means contained in said printer, said printer comprising:

a data reception section (communication circuit 4 in fig. 3);

an interpretation section that can interpret a command proper to said printer (col. 4, lines 59-67); and

an interface unit (control unit 5) comprising: (i) data flow control means for controlling transfer of data between the host and said data reception section and transfer of data between the image read means and the host using a plurality of logical channels (col. 8, lines 26-43), and (ii) image data read and conversion means for converting image data read from the image read means without an intervention of the host into a command that can be interpreted by said interpretation section (image processing unit 14) and sending the converted command to said data reception section using normal communication (col. 4, lines 51-58), the plurality of logical channels and the normal communication allowing for the printer to respond to a plurality of requests simultaneously (col. 12, lines 13-23), and the plurality of logical channels assigned to one signal line (fig. 3),

wherein the print data from the host is received at said data reception section under a control of the data flow control means and is interpreted by said interpretation section, then is expanded into image data and the image data is printed (col. 4, lines 59-67), and the command converted by the image data read and conversion means is received at said data reception section and is interpreted by said interpretation section, thereby expanding into the same image data as the image data and printing the image data, whereby a copy of the original image input through the image read means can be produced (col. 4, lines 49-58).

Note that the print server can be used to control the data flow (col. 17, lines 37-48).

Also, it should be noted that the parallel processing between the host and the printer inherently uses a plurality of logical channels.

10. With respect to claim 10, Kajita discloses the printer according to claim 9, wherein at least the data flow control means transfers the data by packet communication (col. 8, lines 26-43).

11. With respect to claim 11, Kajita discloses the printer according to claim 10, the printer according to claim 10, wherein the image data read and conversion means sends the converted command to said data reception section intact as a command proper to said printer without further converting the converted command into a packet format (col. 4, lines 51-58 & col. 8, lines 26-43). Since the packet data communication is for the network communication, when the apparatus is used as a local copying machine, it is concluded that converting the converted command into a packet format is not performed.

12. With respect to claim 12, Kajita discloses a print system comprising a plurality of logical channels, wherein data flow between at least a host computer and a printer and data flow between the host computer and a scanner are controlled separately using a plurality of said logical channels (col. 8, lines 26-43), and wherein data flow between the scanner and printer is controlled using normal communication the plurality of logical channels and the normal communication allowing for the print system to respond to a

plurality of requests simultaneously (col. 12, lines 13-23), and the plurality of logical channels assigned to one signal line (fig. 3).

13. With respect to claim 1, arguments analogous to those presented for claims 9 and 12, are applicable.

14. With respect to claim 21, arguments analogous to those presented for claims 9 and 12, are applicable.

15. With respect to claim 13, Kajita discloses a data controller to be connected to a host, a printer, and a scanner, said data controller having (i) a data flow control function for controlling transfer of data between the host and the printer and transfer of data between the scanner and the host (col. 11, lines 36-44), and (ii) an image data read and conversion function for reading image data by the scanner without an intervention of the host, converting the image data into data that can be interpreted by a first interpretation section (image processing unit 14) of the printer (col. 4, lines 51-58), and transmitting the converted data to the printer for printing a similar copy to an original image as a local copy,

 said data controller comprising:

 a second interpretation section having an interpretation capability similar to that of the first interpretation section of the printer (col. 4, lines 59-67),

 wherein, when the similar copy to the original image is printed as the local copy, said second interpretation section interprets a command (print request) issued from the host to the printer, and predetermined necessary operation is executed instead of the printer in response to an interpretation result (col. 10, lines 57-63 & col. 22, lines 1-19).

16. With respect to claim 14, Kajita discloses a data controller according to claim 13, wherein at least the data transfer between the host and the printer and the data transfer between the scanner and the host are executed by packet communications (col. 8, lines 26-44).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-7, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kajita in view of Kai U.S. Patent No. 5,943,503.

17. With respect to claim 4, Kajita discloses a data controller (control unit 5 in fig. 3) to be connected to a host (computer 2), a printer (15), and a scanner (12), said data controller having (i) a data flow control function for controlling transfer of data between the host and the printer (col. 4, lines 59-67) and transfer of data between the scanner and the host (col. 5, lines 1-11) using a plurality of logical channels (col. 8, lines 26-43), and (ii) an image data read and conversion function for reading image data by the scanner without an intervention of the host, converting the image data into data that can be interpreted by the printer, and transmitting the converted data to the printer using normal communication for printing a similar copy to an original image as a local copy (col. 4, lines 51-58), the plurality of logical channels and the normal communication

allowing for the data controller to respond to a plurality of requests simultaneously (col. 12, lines 13-23),

 said data controller comprising:

 means for receiving a packet of the image data read from the scanner, transmitting the packet to the host, and transmitting packet data received from the host for controlling the scanner to the scanner (col. 8, lines 26-44);

 status retention means for inputting and retaining a status of the printer (printing process) from the printer (step 302 in fig. 26 and col. 22, lines 1-19); and

 conversion-to-command means (image processing unit 14) for converting image information input from the scanner without the intervention of the host into a command that can be interpreted by the printer (col. 4, lines 51-58 & figs. 5-7).

 Kajita, however, does not disclose expressly said controller comprising:

 means for being responsive to an inquiry about the status of the printer from the host for receiving the packet indicating the status from said status retention means and transmitting the packet to the host and transmitting packet data received from the host for controlling the printer to the printer.

 Kai, the same field of endeavor of the printer control art, discloses a controller comprising:

 status retention means for inputting and retaining a status of a printer from the printer (col. 4, lines 34-39 & col. 5, lines 6-13); and

 means for being responsive to an inquiry about the status of the printer from a host for receiving the data indicating the status from said status retention means and

transmitting the data to the host and transmitting data received from the host for controlling the printer to the printer (col. 6, lines 11-17 and lines 51-67).

Since Kajita teaches the method of exchanging data in the unit of a packet (col. 8, lines 26-43), at the time of the invention, it would have been obvious to one of ordinary skill in the art to combine the printer status acquiring means of Kai with the packet data communication method of Kajita.

The suggestion/motivation for doing so would have been to notify the current status of printer to the host during the parallel process.

Therefore, it would have been obvious to combine Kajita with Kai to obtain the invention as specified in claim 4.

18. With respect to claim 5, Kai discloses said status retention means for inputting and retaining the printer status from the printer periodically (col. 7, lines 1-7 and col. 9, lines 1-13).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate the retaining means for retaining the printer status from the printer periodically into the data controller of Kajita.

The suggestion/motivation for doing so would have been to correctly update the printer status with the latest status change.

Therefore, it would have been obvious to combine Kajita with Kai to obtain the invention as specified in claim 5.

19. With respect to claim 6, Kajita discloses the data controller further comprising data flow regulation means for asynchronously regulating data flow between the host

and the printer, data flow between the scanner and the host, and data flow between the scanner and the printer (col. 8, lines 26-44). Further Kajita inherently discloses the features claimed in claim 6. The Office interprets in such a way since a printer cannot perform printing process for two distinct print data at the same time. Thus, data flow between the scanner and the printer must be halt when the printer is printing the data received or receiving from the host.

20. With respect to claim 7, Kajita discloses the data controller further comprising a local copy start switch for making it possible to manually start a local copy (copy start key 24 in fig. 4).

21. With respect to claim 16, arguments analogous to those presented for claim 4, are applicable.

22. With respect to claim 17, Kajita further discloses data flow regulation means for monitoring packet flow between the host and the printer and packet flow between the scanner and the host and regulating the packet data flow in response to a destination of each packet (col. 8, lines 26-43).

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kajita as applied to claim 13 above, and further in view of Kai.

23. With respect to claim 15, arguments analogous to those presented for claim 4, are applicable.

Claims 18, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Kajita and Kai as applied to claim 16 above, and further in view of Smilansky et al. U.S. Patent No. 5,339,176 (hereinafter Smilansky).

24. With respect to claim 18, the combination of Kajita and Kai discloses all the limitations of claim 16, but it does not disclose a first scanner for reading a color original image and outputting YMCK binary image data and a second scanner for reading a color original image and outputting RGB full color image data.

As previously stated in the office action dated 4/28/04, Smilansky discloses a first scanner (scanner 114 in fig. 1B) for reading a color original image (128) and outputting YMCK binary image data (134) and a second scanner (116) for reading a color original image and outputting RGB full color image data (130).

Kajita and Smilansky are analogous art because they are from the same field of endeavor that is the color scanner art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include the color scanner of Smilansky with the digital color copier Kajita (col. 5, lines 59-67 & col. 8, lines 18-20).

The motivation for doing so would have been to generate color image copies by converting the original into either RGB or YMCK image data. Additionally, it would have been to provide a technique and an apparatus for calibrating a color-processing device in a color digital copier.

Therefore, it would have been obvious to combine Kajita, Kai with Kitamura to obtain the invention as specified in claim 18.

25. With respect to claim 19, Smilansky further discloses color image data conversion means for receiving the RGB full color image data (130) from the second scanner (116) and converting the image data into the YMCK binary image data (132).

26. With respect to claim 20, Smilansky fails to discloses data regulation means for discriminating between the YMCK binary image data received from the first scanner and the RGB full color image data received from the second scanner. The reference discloses the direct connection without the intervention of image data flow regulation section. However, in the applicant disclosed drawing, first scanner (400A) and second scanner (400B) have their own transmission lines to the data controller. Therefore, it is would have been obvious to one having ordinary skill in the art at the time the invention was made that the image data generated by the first scanner goes to conversion-to-command section without color image data converter and the image data generated by the second scanner goes to conversion-to-command section via color image converter.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over combination of Kajita and Kai as applied to claim 4 above, and further in view of Ohnishi U.S. Patent No. 6,067,169.

27. With respect to claim 8, the combination of Kajita and Kai discloses all the limitations of claim 4 but it does not explicitly disclose if the scanner can read a color original image and output YMCK binary image data.

Ohnishi, on the other hand, discloses a digital color copying machines (103, 104) and scanners (109, 110) connected to a host computer for communicating with one

another (fig. 1). It further discloses a data controller (interface device 101) having a CPU (second CPU 209) for controlling transfer of data between a printer and a host computer and transfer of data between a scanner and a host computer (col. 3, lines 37-52). It further discloses a digital copier that is capable of sending current status when a status request is requested by the host computer (col. 7, lines 41-48). Furthermore, it discloses a color scanner for reading color original image and outputting YMCK binary image data (col. 4, lines 16-30).

Kajita, Kai and Ohnishi are analogous art because they are from the same field of endeavor that is the digital printing art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include the color scanner of Ohnishi with the digital copier of Kajita.

The motivation for doing so would have been to generate color image copies. Therefore, it would have been obvious to combine Kajita with Ohnishi to obtain the invention as specified in claim 8.

Contact Information

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHAN S. PARK whose telephone number is (571) 272-7409. The examiner can normally be reached on M-F 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on (571) 272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chan S. Park
Examiner
Art Unit 2625

Chan S. Park

csp
April 21, 2006
DOUGLAS Q. TRAN
PRIMARY EXAMINER
trawlong